

SEQUENCE LISTING

<110> POPPENBERGER, BRIGITTE
ADAM, GERHARD
LUSCHNIG, CHRISTIAN
GLOSSL, JOSEF

<120> METHOD FOR REGULATING PLANT GROWTH

<130> SONN:095US

<140> UNKNOWN

<141> 2006-08-08

<150> PCT/EP2005/001457

<151> 2005-02-14

<150> EP 04450028.8

<151> 2004-02-13

<160> 39

<170> PatentIn version 3.3

<210> 1

<211> 30

<212> DNA

<213> Artificial

<220>

<223> Description of Artificial Sequence:: Synthetic
Primer

<400> 1

actaagcttg gaatcatggt ttccgaaaca

30

<210> 2

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 2

aagcggccgc atactcaatt attgg

25

<210> 3

<211> 31

<212> DNA

<213> Artificial

<220>

<223> Description of Artificial Sequence:: Synthetic
Primer

<400> 3
 ctaagcttgg aatcatggca tcggaatttc g 31

<210> 4
 <211> 30
 <212> DNA
 <213> Artificial

<220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 4
 tagcggccgc attcatttct tgggttggttc 30

<210> 5
 <211> 32
 <212> DNA
 <213> Artificial

<220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 5
 ctaagcttgg aatcatggct ttcgagaaga cc 32

<210> 6
 <211> 30
 <212> DNA
 <213> Artificial

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 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 6
 tagcggccgc attcaactct tggattctac 30

<210> 7
 <211> 32
 <212> DNA
 <213> Artificial

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 Primer

<400> 7
 ctaagcttgg aatcatggct acggaaaaaa cc 32

<210> 8
 <211> 29
 <212> DNA
 <213> Artificial

<220>
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 Primer

 <400> 8
 tagcggccgc attcattctt gaattgtgc 29

<210> 9
 <211> 31
 <212> DNA
 <213> Artificial

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 Primer

 <400> 9
 ctaagcttgg aatcatggct tccgaaaaat c 31

<210> 10
 <211> 29
 <212> DNA
 <213> Artificial

 <220>
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 Primer

 <400> 10
 tagcggccgc attcagttct tggatttca 29

<210> 11
 <211> 31
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 11
 ctaagcttgg aacatgtggt ctcatgatcc t 31

<210> 12
 <211> 30
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 12
 tagcggccgc attcaattat tggactgtgc 30

<210> 13

<211> 59
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 13
 ggatgcccgga acaaaagtta atttcagaag aggacttatc aaagcttgag gcctcgcgga 59

 <210> 14
 <211> 26
 <212> DNA
 <213> Artificial

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 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 14
 tacaagcgaa atcgccaaga agttca 26

 <210> 15
 <211> 26
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 15
 cttcttggcg atttcgcttg tataag 26

 <210> 16
 <211> 30
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 16
 actaagcttg gaatcatggt ttccgaaaca 30

 <210> 17
 <211> 25
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 17

tcttgtgaat tcaactctat cagga 25

<210> 18
<211> 27
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence:: Synthetic
Primer

<400> 18
tacaagcaaa atcgccaaga agttcaa 27

<210> 19
<211> 25
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence:: Synthetic
Primer

<400> 19
acttcttggc gattttgctt gtatt 25

<210> 20
<211> 31
<212> DNA
<213> Artificial

<220>
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Primer

<400> 20
taagcttgga atcatgtggt ctcgatgcc t 31

<210> 21
<211> 26
<212> DNA
<213> Artificial

<220>
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Primer

<400> 21
tcacccggga aacagtaatc atgtcc 26

<210> 22
<211> 22
<212> DNA
<213> Artificial

<220>

<223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 22
 cgaggcagat cgtcagtcag tc 22

<210> 23
 <211> 19
 <212> DNA
 <213> Artificial

<220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 23
 atccgggggtt gaacagcct 19

<210> 24
 <211> 19
 <212> DNA
 <213> Artificial

<220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 24
 tcaattattg ggttctgcc 19

<210> 25
 <211> 19
 <212> DNA
 <213> Artificial

<220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 25
 ggagaaaata ggagtgtta 19

<210> 26
 <211> 19
 <212> DNA
 <213> Artificial

<220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

<400> 26
 tcagttcttg gatttcact 19

<210> 27
 <211> 18

<212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 27
 gagaaactgg tcgtacaa

18

<210> 28
 <211> 19
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 28
 tcaattattg gactgtgct

19

<210> 29
 <211> 21
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 29
 gtccttcttt ctggtaaacg t

21

<210> 30
 <211> 21
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 30
 aacccttgag gttgaatcat c

21

<210> 31
 <211> 38
 <212> DNA
 <213> Artificial

 <220>
 <223> Description of Artificial Sequence:: Synthetic
 Primer

 <400> 31
 gttaaaagct tacatgtgca ttacggctctg tgtgaata

38

<210> 32
<211> 38
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence:: Synthetic
Primer

<400> 32
tttcggatcc catgattcaa ccttagtaag aaactctc

38

<210> 33
<211> 495
<212> PRT
<213> Arabidopsis thaliana

<400> 33

Met Val Ser Glu Thr Thr Lys Ser Ser Pro Leu His Phe Val Leu Phe
1 5 10 15

Pro Phe Met Ala Gln Gly His Met Ile Pro Met Val Asp Ile Ala Arg
20 25 30

Leu Leu Ala Gln Arg Gly Val Ile Ile Thr Ile Val Thr Thr Pro His
35 40 45

Asn Ala Ala Arg Phe Lys Asn Val Leu Asn Arg Ala Ile Glu Ser Gly
50 55 60

Leu Pro Ile Asn Leu Val Gln Val Lys Phe Pro Tyr Leu Glu Ala Gly
65 70 75 80

Leu Gln Glu Gly Gln Glu Asn Ile Asp Ser Leu Asp Thr Met Glu Arg
85 90 95

Met Ile Pro Phe Phe Lys Ala Val Asn Phe Leu Glu Glu Pro Val Gln
100 105 110

Lys Leu Ile Glu Glu Met Asn Pro Arg Pro Ser Cys Leu Ile Ser Asp
115 120 125

Phe Cys Leu Pro Tyr Thr Ser Lys Ile Ala Lys Lys Phe Asn Ile Pro
130 135 140

Lys Ile Leu Phe His Gly Met Gly Cys Phe Cys Leu Leu Cys Met His
145 150 155 160

Val Leu Arg Lys Asn Arg Glu Ile Leu Asp Asn Leu Lys Ser Asp Lys
165 170 175

Glu Leu Phe Thr Val Pro Asp Phe Pro Asp Arg Val Glu Phe Thr Arg
180 185 190

Thr Gln Val Pro Val Glu Thr Tyr Val Pro Ala Gly Asp Trp Lys Asp
195 200 205

Ile Phe Asp Gly Met Val Glu Ala Asn Glu Thr Ser Tyr Gly Val Ile
210 215 220

Val Asn Ser Phe Gln Glu Leu Glu Pro Ala Tyr Ala Lys Asp Tyr Lys
225 230 235 240

Glu Val Arg Ser Gly Lys Ala Trp Thr Ile Gly Pro Val Ser Leu Cys
245 250 255

Asn Lys Val Gly Ala Asp Lys Ala Glu Arg Gly Asn Lys Ser Asp Ile
260 265 270

Asp Gln Asp Glu Cys Leu Lys Trp Leu Asp Ser Lys Lys His Gly Ser
275 280 285

Val Leu Tyr Val Cys Leu Gly Ser Ile Cys Asn Leu Pro Leu Ser Gln
290 295 300

Leu Lys Glu Leu Gly Leu Gly Leu Glu Glu Ser Gln Arg Pro Phe Ile
305 310 315 320

Trp Val Ile Arg Gly Trp Glu Lys Tyr Lys Glu Leu Val Glu Trp Phe
325 330 335

Ser Glu Ser Gly Phe Glu Asp Arg Ile Gln Asp Arg Gly Leu Leu Ile
340 345 350

Lys Gly Trp Ser Pro Gln Met Leu Ile Leu Ser His Pro Ser Val Gly
355 360 365

Gly Phe Leu Thr His Cys Gly Trp Asn Ser Thr Leu Glu Gly Ile Thr
370 375 380

Ala Gly Leu Pro Leu Leu Thr Trp Pro Leu Phe Ala Asp Gln Phe Cys
385 390 395 400

Asn Glu Lys Leu Val Val Glu Val Leu Lys Ala Gly Val Arg Ser Gly
405 410 415

Val Glu Gln Pro Met Lys Trp Gly Glu Glu Glu Lys Ile Gly Val Leu
420 425 430

Val Asp Lys Glu Gly Val Lys Lys Ala Val Glu Glu Leu Met Gly Glu
435 440 445

Ser Asp Asp Ala Lys Glu Arg Arg Arg Arg Ala Lys Glu Leu Gly Asp
450 455 460

Ser Ala His Lys Ala Val Glu Glu Gly Gly Ser Ser His Ser Asn Ile
465 470 475 480

Ser Phe Leu Leu Gln Asp Ile Met Glu Leu Ala Glu Pro Asn Asn
485 490 495

<210> 34
<211> 495
<212> PRT
<213> Vigna angularis

<400> 34

Met Val Leu Gln Thr Asn Asn Val Pro His Phe Val Leu Phe Pro Met
1 5 10 15

Met Ala Gln Gly His Ile Ile Pro Met Met Asp Ile Ala Arg Ile Leu
20 25 30

Ala Gln Arg Gly Val Ile Ile Thr Val Phe Thr Thr Pro Lys Asn Ala
35 40 45

Ser Arg Phe Asn Ser Val Ile Ser Arg Ala Val Ser Ser Gly Leu Lys
50 55 60

Ile Arg Leu Val Gln Leu Asn Phe Pro Ser Lys Glu Ala Gly Leu Arg
65 70 75 80

Glu Gly Cys Glu Asn Leu Asp Met Val Ser Ser Asn Asp Met Ser Lys
85 90 95

Ile Phe Gln Val Ile His Met Pro Gln Lys Pro Ala Glu Glu Phe Phe
100 105 110

Gln Thr Leu Thr Pro Lys Pro Ser Cys Ile Ile Ser Asp Phe Cys Ile
115 120 125

Ala Trp Thr Leu Gln Leu Ala Glu Lys Tyr His Ile Pro Arg Val Ser
130 135 140

Phe His Gly Phe Ser Cys Phe Cys Leu His Cys Arg Tyr Val Ile His
145 150 155 160

Thr Ser Asp Phe Cys Arg Ser Ile Thr Ser Glu Ser Lys Tyr Phe Thr
165 170 175

Ile Pro Gly Ile Pro Asp Lys Ile Gln Val Thr Lys Glu Gln Leu Pro
180 185 190

Gly Ser Leu Ala Thr Asp Leu Asp Asp Phe Lys Asp Gln Val Arg Asp
195 200 205

Ala Glu Lys Lys Ser Tyr Gly Val Ile Val Asn Thr Phe Trp Arg Val
210 215 220

Gly Glu Gly Ile Cys Glu Gly Phe Ser Arg Arg Leu Lys Asn Asn Lys
225 230 235 240

Ala Trp Phe Ile Gly Pro Val Ser Leu Cys Asn Lys Asp Gly Leu Asp
245 250 255

Lys Ala Gln Arg Gly Lys Gln Ala Ser Ile Asn Glu Asn His Cys Leu
260 265 270

Lys Trp Leu Asp Val Gln Gln Ala Lys Ser Val Val Tyr Val Cys Phe
275 280 285

Gly Ser Ile Cys Asn Leu Ile Pro Ser Gln Leu Val Glu Leu Ala Leu
290 295 300

Ala Leu Glu Asp Thr Lys Arg Pro Phe Val Trp Val Ile Arg Glu Gly
305 310 315 320

Ser Gln Leu Gln Glu Leu Glu Lys Trp Phe Ser Glu Glu Gly Phe Glu
325 330 335

Glu Arg Thr Lys Gly Arg Gly Leu Ile Ile Gly Gly Trp Ala Pro Gln
340 345 350

Val Met Ile Leu Ser His Pro Ser Ile Gly Gly Phe Leu Thr His Cys
355 360 365

Gly Trp Asn Ser Thr Leu Glu Gly Ile Cys Ala Gly Val Pro Leu Val
370 375 380

Thr Trp Pro Leu Phe Gly Asp Gln Phe Leu Asn Glu Lys Pro Val Ser
385 390 395 400

Asp Val Leu Arg Ile Gly Val Ser Val Gly Ala Glu Val Pro Leu Lys
405 410 415

Trp Gly Glu Glu Glu Lys Arg Gly Val Met Val Lys Lys Asp Asp Ile
420 425 430

Lys Arg Ala Ile Cys Met Val Met Asp Asp Glu Glu Gly Lys Glu Arg
435 440 445

Arg Glu Arg Val Cys Lys Leu Ser Glu Met Gly Lys Arg Ala Val Glu
450 455 460

Glu Gly Gly Ser Ser His Leu Asp Val Thr Leu Leu Ile Gln Asp Ile
465 470 475 480

Met Gln Gln Thr Asn Thr Lys Glu Asp Glu Ser Leu Ser Asp Val
485 490 495

<210> 35
<211> 476
<212> PRT
<213> Nicotiana tabacum

<400> 35

Met Gly Gln Leu His Phe Phe Phe Phe Pro Val Met Ala His Gly His
1 5 10 15

Met Ile Pro Thr Leu Asp Met Ala Lys Leu Phe Ala Ser Arg Gly Val
20 25 30

Lys Ala Thr Ile Ile Thr Thr Pro Leu Asn Glu Phe Val Phe Ser Lys
35 40 45

Ala Ile Gln Arg Asn Lys His Leu Gly Ile Glu Ile Glu Ile Arg Leu
50 55 60

Ile Lys Phe Pro Ala Val Glu Asn Gly Leu Pro Glu Glu Cys Glu Arg
65 70 75 80

Leu Asp Gln Ile Pro Ser Asp Glu Lys Leu Pro Asn Phe Phe Lys Ala

85

90

95

Val Ala Met Met Gln Glu Pro Leu Glu Gln Leu Ile Glu Glu Cys Arg
 100 105 110

Pro Asp Cys Leu Ile Ser Asp Met Phe Leu Pro Trp Thr Thr Asp Thr
 115 120 125

Ala Ala Lys Phe Asn Ile Pro Arg Ile Val Phe His Gly Thr Ser Phe
 130 135 140

Phe Ala Leu Cys Val Glu Asn Ser Val Arg Leu Asn Lys Pro Phe Lys
 145 150 155 160

Asn Val Ser Ser Asp Ser Glu Thr Phe Val Val Pro Asp Leu Pro His
 165 170 175

Glu Ile Lys Leu Thr Arg Thr Gln Val Ser Pro Phe Glu Arg Ser Gly
 180 185 190

Glu Glu Thr Ala Met Thr Arg Met Ile Lys Thr Val Arg Glu Ser Asp
 195 200 205

Ser Lys Ser Tyr Gly Val Val Phe Asn Ser Phe Tyr Glu Leu Glu Thr
 210 215 220

Asp Tyr Val Glu His Tyr Thr Lys Val Leu Gly Arg Arg Ala Trp Ala
 225 230 235 240

Ile Gly Pro Leu Ser Met Cys Asn Arg Asp Ile Glu Asp Lys Ala Glu
 245 250 255

Arg Gly Lys Lys Ser Ser Ile Asp Lys His Glu Cys Leu Lys Trp Leu
 260 265 270

Asp Ser Lys Lys Pro Ser Ser Val Val Tyr Val Cys Phe Gly Ser Val
 275 280 285

Ala Asn Phe Thr Ala Ser Gln Leu His Glu Leu Ala Met Gly Ile Glu
 290 295 300

Ala Ser Gly Gln Glu Phe Ile Trp Val Val Arg Thr Glu Leu Asp Asn
 305 310 315 320

Glu Asp Trp Leu Pro Glu Gly Phe Glu Glu Arg Thr Lys Glu Lys Gly
 325 330 335

Leu Ile Ile Arg Gly Trp Ala Pro Gln Val Leu Ile Leu Asp His Glu
340 345 350

Ser Val Gly Ala Phe Val Thr His Cys Gly Trp Asn Ser Thr Leu Glu
355 360 365

Gly Val Ser Gly Gly Val Pro Met Val Thr Trp Pro Val Phe Ala Glu
370 375 380

Gln Phe Phe Asn Glu Lys Leu Val Thr Glu Val Leu Lys Thr Gly Ala
385 390 395 400

Gly Val Gly Ser Ile Gln Trp Lys Arg Ser Ala Ser Glu Gly Val Lys
405 410 415

Arg Glu Ala Ile Ala Lys Ala Ile Lys Arg Val Met Val Ser Glu Glu
420 425 430

Ala Asp Gly Phe Arg Asn Arg Ala Lys Ala Tyr Lys Glu Met Ala Arg
435 440 445

Lys Ala Ile Glu Glu Gly Gly Ser Ser Tyr Thr Gly Leu Thr Thr Leu
450 455 460

Leu Glu Asp Ile Ser Thr Tyr Ser Ser Thr Gly His
465 470 475

<210> 36

<211> 476

<212> PRT

<213> Nicotiana tabacum

<400> 36

Met Gly Gln Leu His Ile Phe Phe Phe Pro Val Met Ala His Gly His
1 5 10 15

Met Ile Pro Thr Leu Asp Met Ala Lys Leu Phe Ala Ser Arg Gly Val
20 25 30

Lys Ala Thr Ile Ile Thr Thr Pro Leu Asn Glu Phe Val Phe Ser Lys
35 40 45

Ala Ile Gln Arg Asn Lys His Leu Gly Ile Glu Ile Glu Ile Arg Leu
50 55 60

Ile Lys Phe Pro Ala Val Glu Asn Gly Leu Pro Glu Glu Cys Glu Arg
65 70 75 80

Leu Asp Gln Ile Pro Ser Asp Glu Lys Leu Pro Asn Phe Phe Lys Ala
85 90 95

Val Ala Met Met Gln Glu Pro Leu Glu Gln Leu Ile Glu Glu Cys Arg
100 105 110

Pro Asp Cys Leu Ile Ser Asp Met Phe Leu Pro Trp Thr Thr Asp Thr
115 120 125

Ala Ala Lys Phe Asn Ile Pro Arg Ile Val Phe His Gly Thr Ser Phe
130 135 140

Phe Ala Leu Cys Val Glu Asn Ser Val Arg Leu Asn Lys Pro Phe Lys
145 150 155 160

Asn Val Ser Ser Asp Ser Glu Thr Phe Val Val Pro Asp Leu Pro His
165 170 175

Glu Ile Lys Leu Thr Arg Thr Gln Val Ser Pro Phe Glu Arg Ser Gly
180 185 190

Glu Glu Thr Ala Met Thr Arg Met Ile Lys Thr Val Arg Glu Ser Asp
195 200 205

Ser Lys Ser Tyr Gly Val Val Phe Asn Ser Phe Tyr Glu Leu Glu Thr
210 215 220

Asp Tyr Val Glu His Tyr Thr Lys Val Leu Gly Arg Arg Ala Trp Ala
225 230 235 240

Ile Gly Pro Leu Ser Met Cys Asn Arg Asp Ile Glu Asp Lys Ala Glu
245 250 255

Arg Gly Lys Lys Ser Ser Ile Asp Lys His Glu Cys Leu Lys Trp Leu
260 265 270

Asp Ser Lys Lys Pro Ser Ser Val Val Tyr Ile Cys Phe Gly Ser Val
275 280 285

Ala Asn Phe Thr Ala Ser Gln Leu His Glu Leu Ala Met Gly Val Glu
290 295 300

Ala Ser Gly Gln Glu Phe Ile Trp Val Val Arg Thr Glu Leu Asp Asn

305		310		315		320
Glu Asp Trp Leu Pro Glu Gly Phe Glu Glu Arg Thr Lys Glu Lys Gly						
	325			330		335
Leu Ile Ile Arg Gly Trp Ala Pro Gln Val Leu Ile Leu Asp His Glu						
	340			345		350
Ser Val Gly Ala Phe Val Thr His Cys Gly Trp Asn Ser Thr Leu Glu						
	355			360		365
Gly Val Ser Gly Gly Val Pro Met Val Thr Trp Pro Val Phe Ala Glu						
	370			375		380
Gln Phe Phe Asn Glu Lys Leu Val Thr Glu Val Leu Lys Thr Gly Ala						
385		390		395		400
Gly Val Gly Ser Ile Gln Trp Lys Arg Ser Ala Ser Glu Gly Val Lys						
	405			410		415
Arg Glu Ala Ile Ala Lys Ala Ile Lys Arg Val Met Val Ser Glu Glu						
	420			425		430
Ala Asp Gly Phe Arg Asn Arg Ala Lys Ala Tyr Lys Glu Met Ala Arg						
	435			440		445
Lys Ala Ile Glu Glu Gly Gly Ser Ser Tyr Thr Gly Leu Thr Thr Leu						
	450			455		460
Leu Glu Asp Ile Ser Thr Tyr Ser Ser Thr Gly His						
465		470		475		
<210> 37						
<211> 497						
<212> PRT						
<213> Oryza sativa						
<400> 37						
Met Ser Ser Ala Gly His Ala Val Asp Gln Gln Arg Lys Ser Thr Thr						
1		5		10		15
Met Lys Ala His Phe Val Leu Val Pro Met Met Ala Gln Gly His Met						
	20			25		30
Ile Pro Met Thr Gly Met Ala Arg Leu Leu Ala Glu His Gly Ala Gln						
	35			40		45

Val	Ser	Phe	Val	Thr	Thr	Pro	Val	Asn	Ala	Ala	Arg	Met	Ala	Gly	Phe	50	55	60	
Val	Thr	Ala	Val	Glu	Ala	Ala	Gly	Leu	Ala	Val	Gln	Leu	Val	Lys	Leu	65	70	75	80
Pro	Phe	Pro	Ala	Thr	Glu	Phe	Gly	Leu	Pro	Asp	Gly	Cys	Glu	Asn	Leu	85	90	95	
Asp	Met	Ile	Gln	Ser	Arg	Asp	Leu	Ser	Arg	Asn	Phe	Met	Glu	Ala	Cys	100	105	110	
Gly	Ala	Leu	Arg	Glu	Pro	Leu	Thr	Ala	Arg	Leu	Arg	Gln	Leu	Cys	Pro	115	120	125	
Pro	Pro	Ser	Cys	Ile	Ile	Ser	Asp	Met	Val	Gln	Trp	Trp	Thr	Gly	Glu	130	135	140	
Ile	Ala	Arg	Glu	Leu	Gly	Ile	Pro	Arg	Leu	Thr	Phe	Asp	Gly	Phe	Cys	145	150	155	160
Thr	Phe	Ala	Ser	Leu	Ala	Arg	Tyr	Ile	Ile	Phe	Arg	Asp	Lys	Leu	Leu	165	170	175	
Asp	Asn	Val	Ala	Asp	Glu	Glu	Ile	Val	Thr	Phe	Ser	Gly	Phe	Pro	Met	180	185	190	
Leu	Leu	Glu	Leu	Pro	Lys	Ala	Arg	Cys	Pro	Gly	Ser	Leu	Cys	Val	Pro	195	200	205	
Gly	Met	Glu	Gln	Ile	Arg	Asp	Lys	Met	Tyr	Glu	Glu	Glu	Leu	Gln	Ser	210	215	220	
Asp	Gly	Asn	Val	Met	Asn	Ser	Phe	Gln	Glu	Leu	Glu	Thr	Leu	Tyr	Ile	225	230	235	240
Glu	Ser	Phe	Glu	Gln	Ile	Thr	Gly	Lys	Lys	Val	Trp	Thr	Ile	Gly	Pro	245	250	255	
Met	Cys	Leu	Cys	Asp	Arg	Asp	Ser	Asn	Met	Met	Ala	Ala	Arg	Gly	Asn	260	265	270	
Lys	Ala	Ser	Val	Asp	Glu	Ala	Lys	Cys	Leu	Gln	Trp	Leu	Asp	Ser	Lys	275	280	285	

Lys Pro Gly Ser Val Ile Phe Val Ser Phe Gly Ser Leu Ala Ser Thr
 290 295 300

Ala Pro Gln Gln Leu Val Glu Leu Gly Leu Gly Leu Glu Ala Ser Lys
 305 310 315 320

Glu Pro Phe Ile Trp Val Ile Lys Ala Gly Asn Lys Phe Pro Glu Val
 325 330 335

Glu Glu Trp Leu Ala Asp Gly Phe Glu Glu Arg Val Lys Asp Arg Gly
 340 345 350

Met Ile Ile Arg Gly Trp Ala Pro Gln Val Met Ile Leu Trp His Gln
 355 360 365

Ala Ile Gly Gly Phe Met Thr His Cys Gly Trp Asn Ser Thr Ile Glu
 370 375 380

Gly Ile Cys Ala Gly Val Pro Met Ile Thr Trp Pro His Phe Ala Glu
 385 390 395 400

Gln Phe Leu Asn Glu Lys Phe Val Val Asn Leu Leu Lys Ile Gly Leu
 405 410 415

Glu Ile Gly Val Lys Gly Val Ala Gln Trp Gly Ser Glu His Lys Glu
 420 425 430

Val Arg Val Thr Arg Asn Ala Val Glu Thr Ala Val Ser Thr Leu Met
 435 440 445

Asn Asp Gly Glu Ala Ala Gln Glu Met Arg Met Arg Ala Lys Asp Leu
 450 455 460

Gly Val Lys Ala Arg Arg Ala Leu Glu Glu Gly Gly Ser Ser Tyr Asp
 465 470 475 480

Asn Ile Ser Leu Leu Ile Gln Glu Met Gly Asn Lys Gln Asn Ala Ser
 485 490 495

Gly

<210> 38
 <211> 466
 <212> PRT
 <213> Lycopersicon esculentum

<400> 38

His Phe Phe Phe Phe Pro Asp Asp Ala Gln Gly His Met Ile Pro Thr
1 5 10 15

Leu Asp Met Ala Asn Val Val Ala Cys Arg Gly Val Lys Ala Thr Ile
20 25 30

Ile Thr Thr Pro Leu Asn Glu Ser Val Phe Ser Lys Ala Ile Glu Arg
35 40 45

Asn Lys His Leu Gly Ile Glu Ile Asp Ile Arg Leu Leu Lys Phe Pro
50 55 60

Ala Lys Glu Asn Asp Leu Pro Glu Asp Cys Glu Arg Leu Asp Leu Val
65 70 75 80

Pro Ser Asp Asp Lys Leu Pro Asn Phe Leu Lys Ala Ala Ala Met Met
85 90 95

Lys Asp Glu Phe Glu Glu Leu Ile Gly Glu Cys Arg Pro Asp Cys Leu
100 105 110

Val Ser Asp Met Phe Leu Pro Trp Thr Thr Asp Ser Ala Ala Lys Phe
115 120 125

Ser Ile Pro Arg Ile Val Phe His Gly Thr Ser Tyr Phe Ala Leu Cys
130 135 140

Val Gly Asp Thr Ile Arg Arg Asn Lys Pro Phe Lys Asn Val Ser Ser
145 150 155 160

Asp Thr Glu Thr Phe Val Val Pro Asp Leu Pro His Glu Ile Arg Leu
165 170 175

Thr Arg Thr Gln Leu Ser Pro Phe Glu Gln Ser Asp Glu Glu Thr Gly
180 185 190

Met Ala Pro Met Ile Lys Ala Val Arg Glu Ser Asp Ala Lys Ser Tyr
195 200 205

Gly Val Ile Phe Asn Ser Phe Tyr Glu Leu Glu Ser Asp Tyr Val Glu
210 215 220

His Tyr Thr Lys Val Val Gly Arg Lys Asn Trp Ala Ile Gly Pro Leu
225 230 235 240

Ser Leu Cys Asn Arg Asp Ile Glu Asp Lys Ala Glu Arg Gly Arg Lys
245 250 255

Ser Ser Ile Asp Glu His Ala Cys Leu Lys Trp Leu Asp Ser Lys Lys
260 265 270

Ser Ser Ser Ile Val Tyr Val Cys Phe Gly Ser Thr Ala Asp Phe Thr
275 280 285

Thr Ala Gln Met Gln Glu Leu Ala Met Gly Leu Glu Ala Ser Gly Gln
290 295 300

Asp Phe Ile Trp Val Ile Arg Thr Gly Asn Glu Asp Trp Leu Pro Glu
305 310 315 320

Gly Phe Glu Glu Arg Thr Lys Glu Lys Gly Leu Ile Ile Arg Gly Trp
325 330 335

Ala Pro Gln Ser Val Ile Leu Asp His Glu Ala Ile Gly Ala Phe Val
340 345 350

Thr His Cys Gly Trp Asn Ser Thr Leu Glu Gly Ile Ser Ala Gly Val
355 360 365

Pro Met Val Thr Trp Pro Val Phe Ala Glu Gln Phe Phe Asn Glu Lys
370 375 380

Leu Val Thr Glu Val Met Arg Ser Gly Ala Gly Val Gly Ser Lys Gln
385 390 395 400

Trp Lys Arg Thr Ala Ser Glu Gly Val Lys Arg Glu Ala Ile Ala Lys
405 410 415

Ala Ile Lys Arg Val Met Ala Ser Glu Glu Thr Glu Gly Phe Arg Ser
420 425 430

Arg Ala Lys Glu Tyr Lys Glu Met Ala Arg Glu Ala Ile Glu Glu Gly
435 440 445

Gly Ser Ser Tyr Asn Gly Trp Ala Thr Leu Ile Gln Asp Ile Thr Ser
450 455 460

Tyr Arg
465

<210> 39
<211> 489
<212> PRT
<213> Dorothenathus bellidiformis

<400> 39

Met Gly Thr His Ser Thr Ala Pro Asp Leu His Val Val Phe Phe Pro
1 5 10 15

Phe Leu Ala His Gly His Met Ile Pro Ser Leu Asp Ile Ala Lys Leu
20 25 30

Phe Ala Ala Arg Gly Val Lys Thr Thr Ile Ile Thr Thr Pro Leu Asn
35 40 45

Ala Ser Met Phe Thr Lys Ala Ile Glu Lys Thr Arg Lys Asn Thr Glu
50 55 60

Thr Gln Met Glu Ile Glu Val Phe Ser Phe Pro Ser Glu Glu Ala Gly
65 70 75 80

Leu Pro Leu Gly Cys Glu Asn Leu Glu Gln Ala Met Ala Ile Gly Ala
85 90 95

Asn Asn Glu Phe Phe Asn Ala Ala Asn Leu Leu Lys Glu Gln Leu Glu
100 105 110

Asn Phe Leu Val Lys Thr Arg Pro Asn Cys Leu Val Ala Asp Met Phe
115 120 125

Phe Thr Trp Ala Ala Asp Ser Thr Ala Lys Phe Asn Ile Pro Thr Leu
130 135 140

Val Phe His Gly Phe Ser Phe Phe Ala Gln Cys Ala Lys Glu Val Met
145 150 155 160

Trp Arg Tyr Lys Pro Tyr Lys Ala Val Ser Ser Asp Thr Glu Val Phe
165 170 175

Ser Leu Pro Phe Leu Pro His Glu Val Lys Met Thr Arg Leu Gln Val
180 185 190

Pro Glu Ser Met Arg Lys Gly Glu Glu Thr His Phe Thr Lys Arg Thr
195 200 205

Glu Arg Ile Arg Glu Leu Glu Arg Lys Ser Tyr Gly Val Ile Val Asn
210 215 220

Ser Phe Tyr Glu Leu Glu Pro Asp Tyr Ala Asp Phe Leu Arg Lys Glu
225 230 235 240

Leu Gly Arg Arg Ala Trp His Ile Gly Pro Val Ser Leu Cys Asn Arg
245 250 255

Ser Ile Glu Asp Lys Ala Gln Arg Gly Arg Gln Thr Ser Ile Asp Glu
260 265 270

Asp Glu Cys Leu Lys Trp Leu Asn Ser Lys Lys Pro Asp Ser Val Ile
275 280 285

Tyr Ile Cys Phe Gly Ser Thr Gly His Leu Ile Ala Pro Gln Leu His
290 295 300

Glu Ile Ala Thr Ala Leu Glu Ala Ser Gly Gln Asp Phe Ile Trp Ala
305 310 315 320

Val Arg Gly Asp His Gly Gln Gly Asn Ser Glu Glu Trp Leu Pro Pro
325 330 335

Gly Tyr Glu His Arg Leu Gln Gly Lys Gly Leu Ile Ile Arg Gly Trp
340 345 350

Ala Pro Gln Val Leu Ile Leu Glu His Glu Ala Thr Gly Gly Phe Leu
355 360 365

Thr His Cys Gly Trp Asn Ser Ala Leu Glu Gly Ile Ser Ala Gly Val
370 375 380

Pro Met Val Thr Trp Pro Thr Phe Ala Glu Gln Phe His Asn Glu Gln
385 390 395 400

Leu Leu Thr Gln Ile Leu Lys Val Gly Val Ala Val Gly Ser Lys Lys
405 410 415

Trp Thr Leu Lys Pro Ser Ile Glu Asp Val Ile Lys Ala Glu Asp Ile
420 425 430

Glu Lys Ala Val Arg Glu Val Met Val Gly Glu Glu Gly Glu Glu Arg
435 440 445

Arg Arg Arg Ala Lys Lys Leu Lys Glu Met Ala Trp Arg Ala Ile Glu
450 455 460

Glu Gly Gly Ser Ser Tyr Ser Asp Leu Ser Ala Leu Ile Glu Glu Leu
465 470 475 480

Lys Gly Tyr His Thr Ser Glu Lys Glu
485